

4. (Twice Amended) A leptin peptide having the amino acid sequence Xaa_n-Ser-Cys-Xaa₁-Leu-Pro-Xaa₂-Xaa₃-Xaa_n, wherein:

- B6
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- (a) either Xaa_n is zero or a contiguous stretch of at most seven peptide residues derived from SEQ ID NOS: 1 or 17; and
 - (b) Xaa₁, Xaa₂ and Xaa₃ is any amino acid substitution.

6. (Twice Amended) The leptin peptide of claim 4, wherein:

- B7
- (a) Xaa₁ is selected from the group consisting of His or Ser;
 - (b) Xaa₂ is selected from the group consisting of Trp or Gln;
 - (c) Xaa₃ is selected from the group consisting of Ala or Thr; or
 - (d) the leptin peptide contains any combination of (a) or (b) or (c).

12. (Twice Amended) A peptide comprising an amino acid sequence of the leptin protein of any one of SEQ ID NOS:1 and 17, selected from the group consisting of:

- B8
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- (i) a sequence comprising amino acids 21-35 (SEQ ID NO:3);
 - (ii) a sequence comprising amino acids 31-45 (SEQ ID NO:4);
 - (iii) a sequence comprising amino acids 41-55 (SEQ ID NO:5);
 - (iv) a sequence comprising amino acids 51-65 (SEQ ID NO:6);
 - (v) a sequence comprising amino acids 61-75 (SEQ ID NO:7);
 - (vi) a sequence comprising amino acids 71-85 (SEQ ID NO:8);
 - (vii) a sequence comprising amino acids 81-95 (SEQ ID NO:9);
 - (viii) a sequence comprising amino acids 91-105 (SEQ ID NO:10);
 - (ix) a sequence comprising mouse amino acids 116-122 (SEQ ID NO:2);
 - (x) a sequence comprising human amino acids 116-122 (SEQ ID NO:18);

and fragments, derivatives, homologs and analogs thereof.

B9
2005

18. (Twice Amended) A composition comprising the leptin peptide of claim 1, and a pharmaceutically acceptable carrier.